

MULTIMEDIA



UNIVERSITY

STUDENT IDENTIFICATION NO

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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

TRIMESTER 2, 2015/2016

**BAC 4684 – ERP SYSTEMS**

(All sections / Groups)

11 MARCH 2016

9am to 12pm  
(3 Hours)

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### INSTRUCTIONS TO STUDENT

1. This Question paper consists of 7 pages with 4 Questions only.
2. Attempt **ALL** questions. The distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

## QUESTION 1

### HERSHEY'S ERP IMPLEMENTATION FAILURE

#### Overview

When it cut over to its \$112-million IT systems, Hershey's worst-case scenarios became reality. Business process and systems issues caused operational paralysis, leading to a 19-percent drop in quarterly profits and an eight-percent decline in stock price. In the analysis that follows, I use Hershey's ERP implementation failure as a case study to offer advice on how effective ERP system testing and project scheduling can mitigate a company's exposure to failure risks and related damages.

#### Key Facts

Here are the relevant facts: In 1996, Hershey's set out to upgrade its patchwork of legacy IT systems into an integrated ERP environment. It chose SAP's R/3 ERP software, Manugistic's supply chain management (SCM) software and Seibel's customer relationship management (CRM) software. Despite a recommended implementation time of 48 months, Hershey's demanded a 30-month turnaround so that it could roll out the systems before Y2K. Based on these scheduling demands, cutover was planned for July of 1999. This go-live scheduling coincided with Hershey's busiest periods – the time during which it would receive the bulk of its Halloween and Christmas orders. To meet the aggressive scheduling demands, Hershey's implementation team had to cut corners on critical systems testing phases. When the systems went live in July of 1999, unforeseen issues prevented orders from flowing through the systems. As a result, Hershey's was incapable of processing \$100 million worth of Kiss and Jolly Rancher orders, even though it had most of the inventory in stock.

This is not one of those "hindsight is 20-20" cases. A reasonably prudent implementer in Hershey's position would never have permitted cutover under those circumstances. The risks of failure and exposure to damages were simply too great. Unfortunately, too few companies have learned from Hershey's mistakes. For our firm, it feels like Groundhog Day every time we are retained to rescue a failed or failing ERP project. In an effort to help companies implement ERP correctly – the first time – I have decided to rehash this old Hershey's case. The two key lessons I describe below relate to systems testing and project scheduling.

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## ERP Systems Testing

Hershey's implementation team made the cardinal mistake of sacrificing systems testing for the sake of expediency. As a result, critical data, process, and systems integration issues may have remained undetected until it was too late.

Testing phases are safety nets that should never be compromised. If testing sets back the launch date, so be it. The potential scheduling benefits of skimping on testing outweigh the costs of keeping to a longer schedule. In terms of appropriate testing, our firm advocates methodical simulations of realistic operating conditions. The more realistic the testing scenarios, the more likely it is that critical issues will be discovered before cutover.

For our clients, we generally perform three distinct rounds of testing, each building to a more realistic simulation of the client's operating environment. Successful test completion is a prerequisite to moving onto to the next testing phase.

In the first testing phase – the Conference Room Pilot Phase – the key users test the most frequently used business scenarios, one functional department at a time. The purpose of this phase is to validate the key business processes in the ERP system.

In the second testing phase – the Departmental Pilot Phase – a new team of users tests the ERP system under incrementally more realistic conditions. This testing phase consists of full piloting, which includes testing of both the most frequently used and the least frequently used business scenarios.

The third and final testing phase – the Integrated Pilot Phase – is the most realistic of the tests. In this “day-in-the-life” piloting phase, the users test the system to make sure that all of the various modules work together as intended.

With respect to the Hershey's case, many authors have criticized the company's decision to roll out all three systems concurrently, using a “big bang” implementation approach. In my view, Hershey's implementation would have failed regardless of the approach. Failure was rooted in shortcuts relating to systems testing, data migration and/or training, and not in the implementation approach. Had Hershey's put the systems through appropriate testing, it could have mitigated significant failure risks.

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## ERP Implementation Scheduling

Hershey's made another textbook implementation mistake – this time in relation to project timing. It first tried to squeeze a complex ERP implementation project into an unreasonably short timeline. Sacrificing due diligence for the sake of expediency is a sure-fire way to get caught.

Hershey's made another critical scheduling mistake – it timed its cutover during its busy season. It was unreasonable for Hershey's to expect that it would be able to meet peak demand when its employees had not yet been fully trained on the new systems and workflows. Even in best-case implementation scenarios, companies should still expect performance declines because of the steep learning curves.

By timing cutover during slow business periods, a company can use slack time to iron out systems kinks. It also gives employees more time to learn the new business processes and systems. In many cases, we advise our clients to reduce incoming orders during the cutover period.

In closing, any company implementing or planning to implement ERP can take away valuable lessons from the Hershey's case. Two of the most important lessons are: test the business processes and systems using a methodology designed to simulate realistic operating scenarios; and pay close attention to ERP scheduling. By following these bits of advice, your company will mitigate failure risks and put itself in a position to drive ERP success.

### Required:

- a) Based on the case study above, what was Hershey's move with regards to upgrading its' legacy IT system? (12 marks)
- b) Explain the difference between a "big-bang" implementation approach and phased-in approach. (15 marks)
- c) What are the reasons for Hershey's ERP implementation failure? (7 marks)
- d) What are the lessons that can be learned from Hershey's ERP implementation failure? (6marks)

**(Total: 40 marks)**

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**QUESTION 2**

**Part A**

Briefly state and explain each stage of the production planning process. (15 Marks)

**Part B**

(i) Define the terms human capital management. (2.5 marks)

(ii) Cite one advantage of using software as a service (SaaS). (2.5 marks)

**(Total: 20 Marks)**

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### QUESTION 3

#### Part A

Assume Fitter Snacker's existing information systems are in place. FS has a customer called First State TastyBars. Here is the background data on FS and First State TastyBars:

Today's date	4/20/2001
Current list price, NRG-A bars	1.00/bar
Accounts receivable balance at start of business day, First State TastyBars, as shown on the list available in Marketing	\$15,000
Credit Limit, First State TastyBars	\$17,000

An order came in from First State TastyBars:

Product	NRG-A
Amount	10 cases (288 bars/case)
Price	List
Ship to	First State TastyBars headquarters
Date desired	4/25/2001
Next invoice number	A1200
Customer Purchase Order Number	FST 1003

There are some documents in FS's system as follows:

Purchase order FST 988 for 3 cases (864 bars) of NRG-A. This order is in the FS sales order-entry program, but Accounting has not been told about it yet.
A check from FST for \$5184 was received in yesterday's mail and entered into Accounting's PeachTree program. The check applies to some March 2001 orders. The list of accounts receivable balances that Marketing uses does not reflect this payment.

Continued...

- a. Given the state of FS's systems, will credit be granted or denied on the current order (purchase order FST 1003)? (5 marks)
- b. What is the actual First State TastyBars accounts receivable balance (without considering the current order)? (5 marks)
- c. If the FS systems processed transaction data in a more timely way would credit be granted or denied? Why? (5 marks)

**Part B**

How does ERP facilitate "drilling down" to see the details of transaction data? (5 marks)

**(Total: 20 Marks)**

**Continued...**

**QUESTION 4****Part A**

Oats weeks	Lead Time = 2	Week 1 Week 2 Week 3 Week 4 Week 5				
		Week 1	Week 2	Week 3	Week 4	Week 5
<b>Gross Requirements (db)</b>		18,000	24,323	24,872	18,464	17,938
<b>Scheduled Receipts</b>			44,000			
<b>Planned Receipts</b>						
<b>On Hand</b>	23,635	5,635	25,312	440		
<b>Planned Orders</b>						

a) What Planned Orders will the MRP logic create? (7 marks)

b) What will the On Hand inventory be in week 5 after the system calculated planned orders? (8 marks)

**Part B**

Define “scope creep”. (5 marks)

(Total: 20 Marks)

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